

technology, including personal communications services (PCS), cable services and data services.

- **Central Power and Light Company**

Central Power and Light (CPL), a subsidiary of Central and South West, is building a 170-mile fiber optic network from Corpus Christi to McAllen to reduce CPL's future communications costs by interconnecting company locations. Excess capacity from these networks could be used to offer telecommunications services in competition with SWBT.

- **ICG Access Services, Inc.**

ICG, a subsidiary of Denver-based IntelCom Group, Inc., intends to get into the local telephone business by leasing part of a fiber optic network being built by the City of San Antonio's electric utility department. ICG's nationwide strategy is to use fiber optic lines of electric and gas companies. ICG is employing that strategy to become a competitive local service provider in San Antonio. The firm has signed a 25-year, \$10 million deal with City Public Service of San Antonio to use its excess fiber capacity to provide telephone service in the near future.

PURA 95 forbids municipalities or municipal electric systems from selling telecommunications services to the public, either directly or indirectly through a separate provider. Furthermore, since right-of-way easements are owned by the city and the city charter forbids discrimination in their use, some observers believe ICG should seek a city franchise through a public hearing process.

Texas Attorney General Dan Morales opined that ICG's contract with San Antonio's public utility violates provisions in PURA 95 that disqualify public utilities from competing for local telephone service. ICG has asked the FCC for a ruling overturning those provisions of PURA 95.

- **GST Lightwave, Inc.**

A partnership with an electric utility could come from GST Lightwave, Inc., a competitive access provider. It is a subsidiary of Washington based GST Telecommunications, Inc., a leading CAP in the Western United States and Hawaii. Company records indicate that GST wants to use its existing and future CAP networks to market integrated local and long-distance services.

GST currently has an application pending before the PUC to compete with SWBT and other local exchange telephone companies as an SPCOA. In Arizona, GST has an agreement with Tucson Electric Power Co., Inc. that will allow it to use the power company's conduits, towers, and poles to complete a Tucson fiber network. In return, the utility company will obtain capacity on that network for "energy products and services."

According to documents filed with the PUC by GST Lightwave Inc., it plans to provide basic telephone services in three SWBT exchanges and one GTE exchange. The SWBT exchanges are located in Dallas, Houston and El Paso. The GTE exchange is located in Plano, a heavily populated suburb North of Dallas. GST is already

certified to provide competitive local services in California, Arizona and Hawaii. In New Mexico, GST is certified to provide intrastate non-switched services.

- **MCI Communications Corporation**

MCI Communications is the second largest long-distance company in the U.S. and the third largest carrier of international long-distance services in the world. It promises to be a significant provider of local services in Texas, as well.

Organized in 1968, MCI grew from a niche provider of microwave telecommunications service to a nationwide provider of residential long distance by 1980. By 1984, MCI was also providing international long-distance service to Canada and Europe. By 1988, the company had a 10 percent market share of domestic long distance, and brought in revenues of \$5.1 billion. In 1995, these figures were 18 percent and \$15.2 billion, respectively. From 1994 to 1995, MCI's employee base grew from 41,000 to 50,000.

MCImetro was formed in 1993 to enter the local service market, competing with LECs and other CAPs. MCImetro's 1995 revenues were \$108 million, while capital expenditures were \$265 million. A better gauge of MCI's potential in the Texas local service market, however, is the current status of its local operations in other states. So far, MCI has applied to provide local service in 19 states, and has been approved in 14. It has reached interconnect agreements with Bell South for five states: Florida, Georgia, Tennessee, Alabama, and North Carolina. Currently, MCImetro is providing local telephone service in ten cities: Baltimore, Boston, Chicago, Detroit, Hartford, Milwaukee, New York City, Pittsburgh, Philadelphia, and Seattle.

Another measure of MCI's potential in the local market is its infrastructure, both in Texas and elsewhere. Through construction, or joint ventures and alliances with CAPs, MCI has full or part ownership of 40 local networks in 25 major cities. Not surprisingly, MCI's current plans call for expanding its local service coverage to these same 25 cities by the end of 1997. The type and quality of infrastructure, as well as the quantity, speaks to MCI's local potential. MCI has self-healing fiber optic rings in Dallas, Cincinnati, Detroit, and Seattle. The company has installed 11 central office switches specifically for providing local telephone services. Eight of these are in use; the other three await state regulatory approval or interconnect agreements with local exchange carriers.

MCI has also joined Microsoft and Digital Equipment Corporation to provide Internet access. Another service, which they call *Intranet*, lets employees of a company in two different locations work on a project in tandem. This service will compete with ISDN services provided by incumbent LECs.

MCI has positioned itself to compete with many telecommunications providers for local telephone service. Even though MCImetro's SPCOA application was denied by the PUC, it has applied for additional certifications. MCI's new filings are: MCImetro Access as an SPCOA and MCImetro as a COA. However, should these filings be denied, MCI could still be in a position to offer local telephone service without any

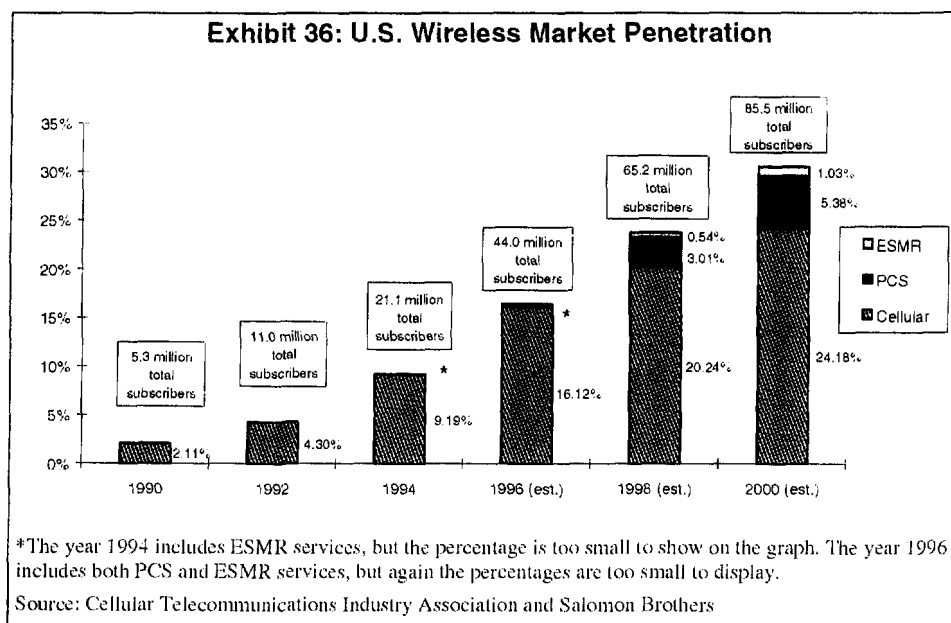
COA requirements. This could occur once Southwestern Bell gains interLATA freedom.

Barriers to entry

SWBT sees no barriers to entry into local exchange telephone service.

WIRELESS SERVICE

Wireless technology is replacing traditional local exchange service carried over telephone lines. Wireless is one of the fastest growing areas in the industry. This growth is due mainly to the development of digital technology and declining costs of providing wireless services. Wireless includes cellular, Personal Communications Services (PCS), paging and specialized mobile radio/enhanced specialized mobile radio (SMR/ESMR) (Exhibit 36). These wireless services are currently competing with all telephone companies for residence, business and long-distance telephone services. Cellular phones, PCS phones, pagers, and ESMR equipment are all being used for local communications.



Cellular is the largest of the wireless services. Nationwide, the number of cellular subscribers has increased from about 91,000 in 1984 to 21.1 million in 1994. This number represents 9 percent of the U.S. population. Estimates indicate that the wireless industry will increase to over 85 million subscribers by the year 2000.

Personal Communications Services, still in its infancy, is the newest wireless service. The U.S. Congress authorized PCS in 1993. A potentially strong contender in the telecommunications market, PCS offers "cellular-like" services. However, unlike cellular, PCS will have many small antennas scattered throughout the service area. This feature will enable hand units to operate on lower power, thus reducing their weight and cost in comparison to cellular. In addition, PCS' digital technology and the frequencies it uses will extend wireless service offerings beyond just voice to more data-intensive applications like video, faxes, data and more.

Some experts predict phenomenal growth for PCS. Growth of cellular services has exceeded early predictions; still, only about 9 percent of the United States population uses this technology, leaving plenty of room for growth of wireless services like PCS. The Personal Communications Industry Association projects that there will be 167 million PCS

and cellular users in the country by 2023. Our public's appetite for communications mobility combined with potentially competitive PCS prices account for much of the optimism. Unlike the analog signaling of traditional cellular service, PCS uses digital technology. Digital signaling reduces costs by moving more information in less space. This characteristic also allows providers to offer attractive PCS packages including data-intensive services like video.

Ending last March, the Federal Communications Commission auctioned off portions of the PCS spectrum in the largest sale of public property in history. Nineteen companies paid over \$7 billion to purchase 99 licenses in 51 "Major Trading Areas." Exhibit 38 on the following page shows the PCS companies' major trading areas in Texas.

Specialized Mobile Radio is another wireless service that uses radio technology to transmit two way dispatch, data broadcast and mobile telephone service. This service increased approximately 18 percent from 1993 to 1994. The number of SMR customers reached about 1.8 million in 1995.

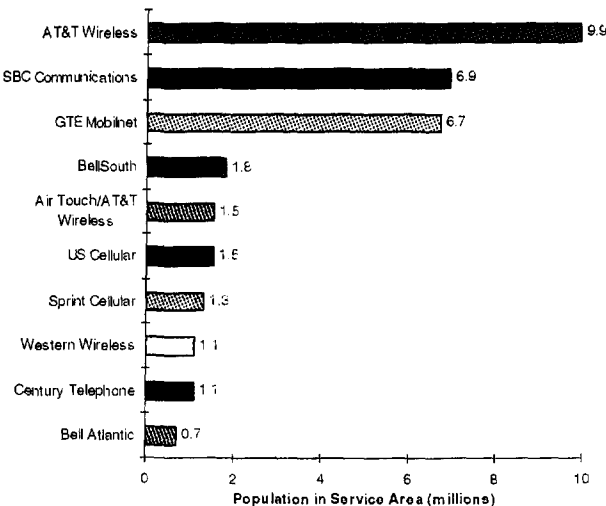
While not covered in depth in this report, two additional wireless technologies are *paging services* and *Mobile Satellite Service*. Like other wireless areas, the paging industry is experiencing rapid growth. Of the 14 largest paging companies, eight have grown more than 25 percent since early 1995. Three paging companies in Texas are among the largest in the nation: Paging Network Inc.(PageNet), Air Touch Paging and PageMart Inc. Mobile Satellite service (MSS) is a satellite technology involving low or medium earth satellites that allow companies to provide wireless phone, data, fax and paging services.

In an effort to create a complete telephone network, wireless providers in all these areas have started to form partnerships with other providers of telecommunications services: competitive access providers, cable TV companies and long-distance companies. The following information on known and potential competition highlights the growth in wireless and the market power emerging through these coalitions.

Known competition

Wireless competitors offering cellular, PCS and SMS services will all be competing for the local calling customer in Texas. Exhibits 37 and 38 display major companies involved in cellular and PCS services in the state. Some of these major companies, as well as other smaller wireless competitors, have also sought status as local service providers in Texas. Various companies from each of these groups, as well as other selected emerging wireless competitors, are profiled below.

Exhibit 37: Population Reached by Major Cellular Companies in Texas



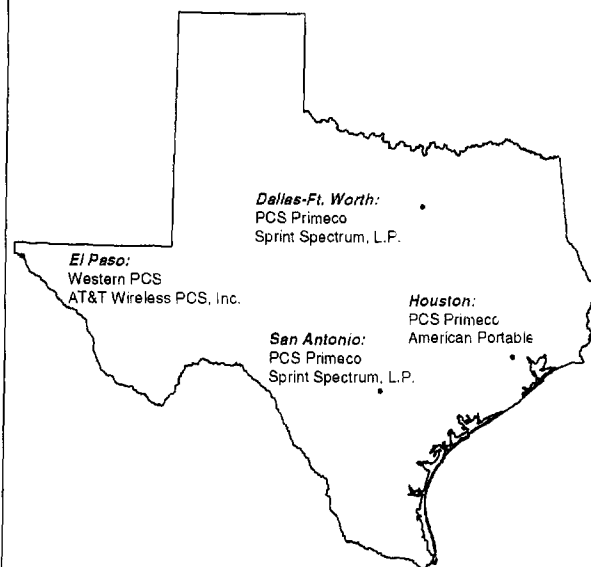
Source: Kagan's Cellular Telephone Atlas 1995

- **WinStar Wireless of Texas, Inc.**

WinStar Wireless is one of the companies the PUC has approved as an SPCOA in Texas. Its status as a future local service provider as well as a wireless provider illustrates how companies are combining telecommunications functions.

As a wireless company, WinStar operates wireless local telecommunications services in the United States. The company uses its wireless loops to offer a range of switched offerings, including access and local calling. The company also uses wireless fiber links to extend the networks of long-distance companies and competitive access providers (CAPs) to their customers.

Exhibit 38: PCS Companies in Texas' Major Trading Areas



Source: SWBT Internal Records

WinStar currently provides local telephone service in California and Florida, and its application is pending in Michigan, Maryland and New York. The company has been providing wireless telephone service in 29 metropolitan statistical areas including Atlanta, Boston, Chicago, Los Angeles and New York. The company has either

provided, or has received service orders to provide, wireless fiber services to MCImetro Access, Teleport, Geotek Communications and Electric Lightwave.

- **GTE Mobilnet**

GTE provides wireless service to 6.8 million subscribers in Texas and 49 million subscribers nationally through its cellular subsidiary, GTE Mobilnet. GTE also offers local service through its "core" local exchange service. The company is the second largest local telephone company in Texas. GTE has about 1.8 million telephone lines in 455 calling exchanges spanning 180 counties. GTE is following the trend of adding to its local services in various ways. Its application to obtain an SPCOA is currently pending before the PUC. In addition, GTE Macro Communications, a subsidiary of GTE, has also purchased four PCS licenses to serve Denver and Atlanta; no Texas cities are included.

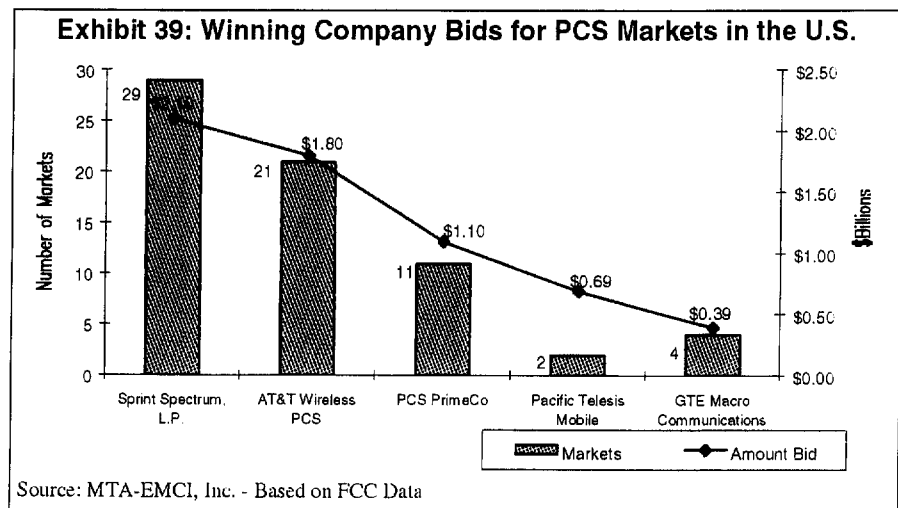
- **Sprint Spectrum**

Sprint's long-distance operations are well known. The company's move into local calling through its PCS partnership, Sprint Spectrum, is a basic building block for Sprint's future. Sprint Spectrum is co-owned by Sprint and three cable companies, Comcast Corporation, Cox Enterprises, and Tele-Communications, Inc. This resources-rich alliance is the largest of the PCS bidders, having spent \$2.1 billion to provide PCS in 29 U.S. markets (Exhibit 39). These markets include about 167 million people.

PCS adds more to Sprint's offerings than simply local service. Sprint can bypass local exchange companies to potentially offer seamless nationwide service through its existing

cellular properties its new PCS operations and its long-distance backbone. This potential is enhanced through the infrastructure available from Sprint's three cable partners, TCI, Cox and Comcast. Collectively, these cable companies have about 18 million customers and networks that pass 30 million homes.

In Texas, Sprint has PCS licenses to serve the trading areas of Dallas/Fort Worth and San Antonio. These markets contain about 13 million potential subscribers.



- **AT&T Wireless**

AT&T Wireless, a subsidiary of AT&T, is the largest of the cellular carriers in Texas and the nation. As with other wireless operations, AT&T Wireless provides an alternative to local exchange telephone service today. The company is licensed to serve approximately 9.9 million people in Texas and 63 million in the U.S.

AT&T Wireless is enlarging its local calling scope beyond its cellular operations. AT&T Wireless has acquired 21 PCS markets in the U.S., including the El Paso market. In addition, AT&T recently gained PUC approval to provide local telephone service as a COA in Texas. AT&T has also been licensed to provide a nationwide paging service. Between cellular, PCS, and paging services, AT&T Wireless will have a nationwide wireless footprint covering over 189 million people.

- **Primeco Personal Communications L.P.**

Primeco has won FCC licenses to provide PCS services in the San Antonio, Houston, and Dallas/Fort Worth areas. The company has as its partners the three Bell operating companies of Bell Atlantic, NYNEX and U S West, along with AirTouch (previously Pacific Telesis Cellular). AirTouch, one of the largest paging companies nationwide, covers 29 states and 167 markets in the U.S. AirTouch's current paging markets in Texas are Austin, San Antonio, Houston, Dallas/Ft. Worth, El Paso and Midland/Odessa. Besides including regional operating companies, cellular companies and paging companies, this consortium is also partnered with Texas Utilities Electric Company (TU). Texas Utilities has a 20 percent interest in Primeco's PCS operations in three major trading areas of Texas: Dallas, Houston and San Antonio.

- **Nextel Communications**

Nextel is the leading provider of specialized mobile radio (SMR) wireless services in the 50 largest metropolitan markets in the U.S. Nextel is also the largest provider of such services in Texas, serving two of the largest SMR markets in the nation: Dallas and Houston. With leading-edge technology, Nextel uses cellular-like networks for their SMR systems. Nextel's new digital systems are expected to grow from 14,000 in 1994 to 2 million by 1999.

Potential competition

Several companies have potential for establishing wireless services in Texas. This potential stems from operations which could logically extend to wireless service in the state.

- **MCI**

MCI Communications has acquired Nationwide Cellular Service, Inc. This acquisition positions the company to become a significant participant in the cellular phone and paging service markets. MCI Communications will begin offering free cellular long distance and expects to provide cellular in 20 major markets covering nearly 45 percent of the U.S. population by the end of 1996.

MCI may use these cellular resources to promote its local service interests in Texas. The company has demonstrated its interest in the Texas local market by applying for an SPCOA, but the Public Utility Commission denied that request. MCI exceeds the PURA 95 cutoff for SPCOA applicants by having more than 6 percent intrastate switched access minutes of use. Cellular may provide MCI with another route into local service in Texas.

- **Bell Atlantic/NYNEX**

Bell Atlantic and NYNEX Corporation have agreed to form an alliance combining their cellular operations. The resulting enterprise will serve 53 metropolitan statistical areas (MSAs) and 47 rural service areas (RSAs). It will provide cellular operations from Maine to South Carolina, with a potential customer pool of 55 million people. This merger would also allow the new company to pursue necessary funds to expand into PCS markets, as well. As mentioned previously, the alliance has already formed a wireless partnership with U.S. West and Air Touch to provide a nationwide PCS network under the name Primeco Personal Communications L.P. The combined operations would be valued at approximately \$13 billion with revenues of \$1.2 billion and a customer base of 1.8 million.

Primeco has PCS interests in Houston, Dallas/Fort Worth and San Antonio. The Bell Atlantic/NYNEX presence in this venture gives the alliance a foothold in Texas and an incentive to pursue their cellular interests here as well.

- **Lower Colorado River Authority (LCRA)**

LCRA has established an affiliate called LCRA Communications Corp. to run a dispatch business. The resulting SMR system will serve LCRA's 58 counties in central Texas. The corporation will market excess capacity on the 50-site network primarily to public safety agencies.

- **Satellite Communications**

Several companies have received licenses to operate satellite-based communications systems. They are Iridium (backed by Motorola), Globalstar (a joint venture of Loral and Qualcomm), and Odyssey (a joint venture of TRW and Teleglobe). Iridium plans to begin service in the U.S. by 1998. Globalstar expects to provide phone, data and fax service in the U.S. by 1999. Satellite communications is expected to compete with local telephone companies that would normally deliver wireless phone, data, fax and paging. Texas would benefit from these services as would other states in the U.S.

Barriers to entry

SWBT sees no barriers to entry into wireless services.

OTHER SERVICES

Apart from local exchange and wireless services, a variety of other local network services exists. These include: public pay telephone, joint user services, enhanced services, billing and collection service, dark fiber service, private line service, central office-based PBX-type services, customized services, custom calling features, and non-voice data transmission service. Most of these areas have been competitive for some time. SWBT sees no barriers to entry into these areas and expects competition in them to increase as growth in telecommunications stimulates the possibility of profits.

Long-Distance Services

INTRODUCTION

A long-distance call is a call that originates within a local telephone exchange but terminates outside that exchange. These types of calls are often categorized as being *intraLATA* or *interLATA* long-distance calls -- a LATA being a specific geographic area defined by the federal courts after the breakup of the Bell system in 1984. An *intraLATA* long-distance call is a call that travels between local exchanges but within the same LATA. An *interLATA* call is one that crosses a LATA boundary traveling from a local exchange in one LATA to a local exchange in a different LATA. A toll is charged by the long-distance provider on both *intraLATA* and *interLATA* long-distance calls. Since the breakup of the Bell System in 1984, *SWBT has only been permitted to offer intraLATA long-distance service within its five-state region.*

In Texas and across the country, there are numerous companies providing long-distance services: interexchange carriers, long-distance resellers, local exchange companies and operator service providers. These companies are marketing services that are competing with local telephone company *intraLATA* toll services.

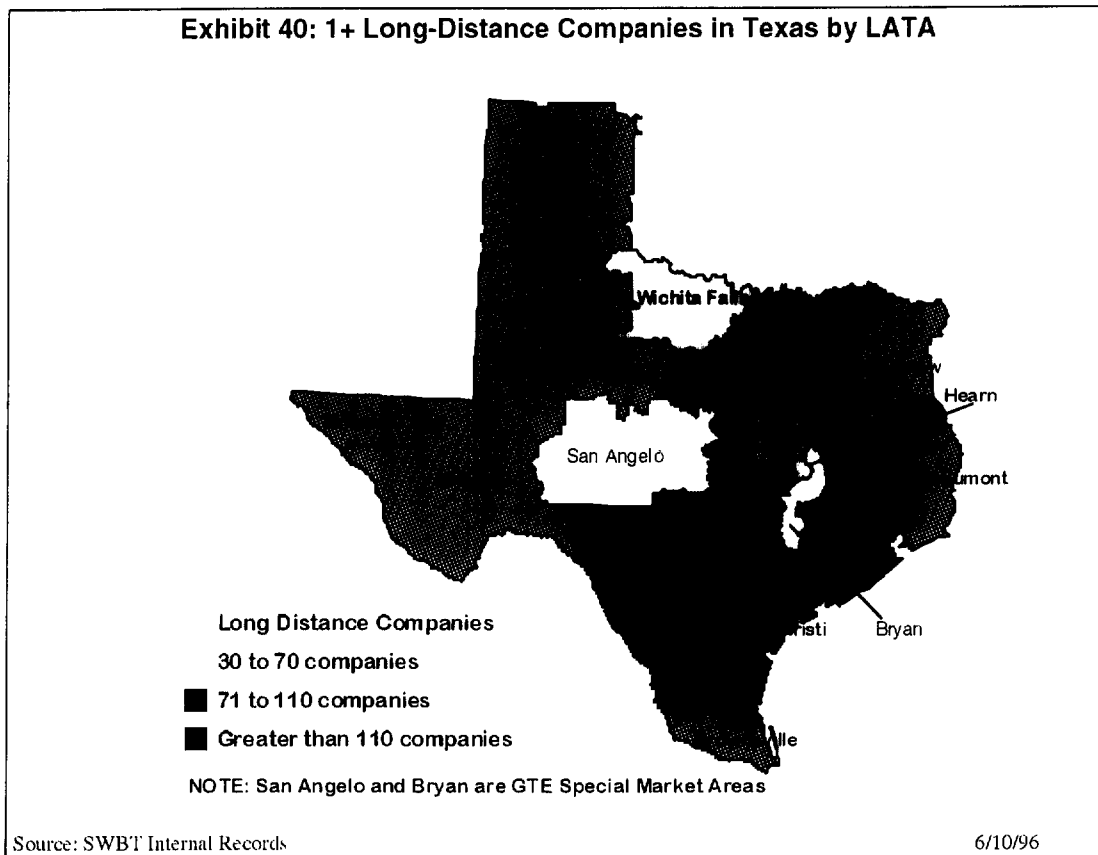
Since the effective date of House Bill 2128 on September 1, 1995, three significant trends have been observed. First, over 100 new long-distance companies have registered to provide long-distance service in Texas. Second, Bell Atlantic, another Bell operating company, and GTE have registered and are expected to provide both *intraLATA* and *interLATA* long-distance service in Texas. Finally, over 15 long-distance companies have been granted authority to provide local exchange service in Texas.

Known competition

Five of the nation's largest providers of long-distance service offer long-distance service in Texas: AT&T, MCI, Sprint, LDDS WorldCom and LCI.

At divestiture in 1984, AT&T held the highest percentage of the long-distance market. It still does. The FCC reports that AT&T's 1995 revenues were \$12 billion, which keeps them on top with 55 percent of the long-distance market. This report also listed other company market shares and annual revenues: MCI at 18 percent with revenues of \$3.9 billion, Sprint at 9 percent, with revenues of \$2 billion and other smaller companies at 18 percent. These smaller long-distance companies include WorldCom and LCI International and had combined annual revenues of \$4 billion. LCI is the nation's sixth largest long-distance telephone carrier and is among the fastest growing long distance companies. LCI's revenue increased 45 percent during 1995 and minutes of use on its network were up 48 percent to 4.9 billion minutes when compared to an industry average rate of 7 to 8 percent.

Texas remains one of the nation's most competitive long-distance markets in the country with over 700 companies offering long-distance service. Exhibit 40 is an illustration that shows by LATA the number of long-distance companies providing 1+ long distance in Texas.



Competition continues to emerge not only from the increased number of long-distance companies but through different types of toll alternatives. These alternatives range from access code dial-around and prepaid calling cards to long-distance calling plans to cellular calling.

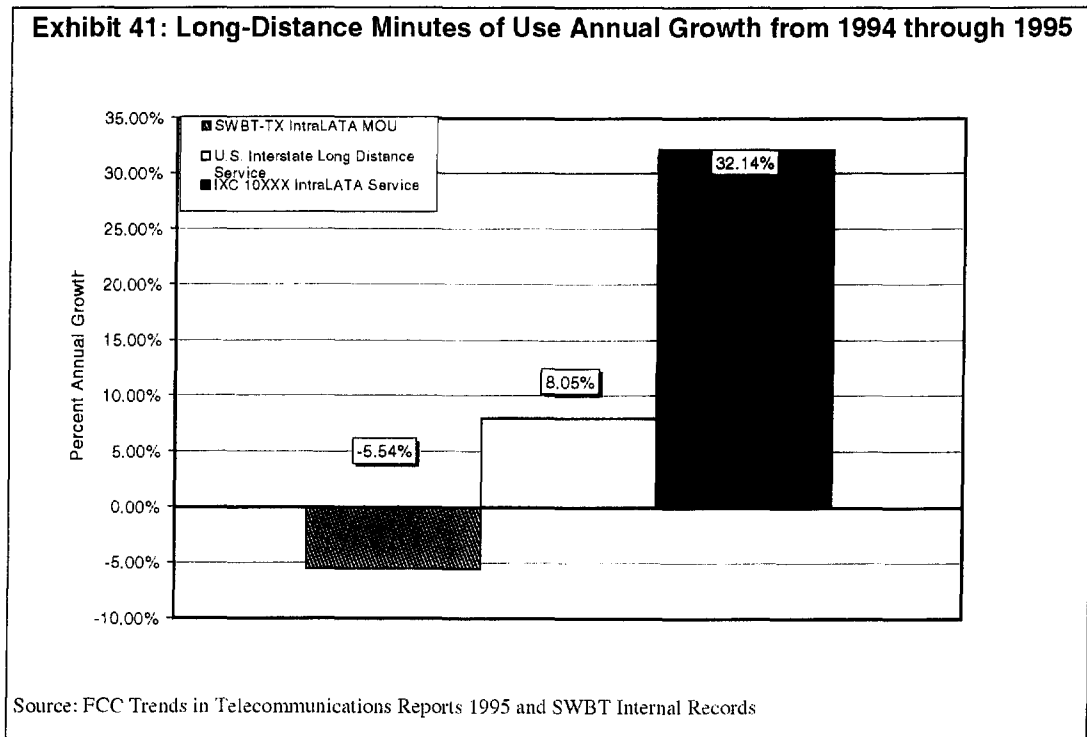
IntraLATA long-distance in Texas

For many intraLATA long-distance calls, the local exchange company is the "default" carrier. That is, the customer picks up the phone and dials "1" plus the area code and phone number (called "1+" intraLATA toll). In this case, the local exchange carrier certified in that area carries and charges for the call automatically. However, there are alternatives for placing intraLATA calls. One of the most common ways is to select a long-distance company that offers "dial around" telephone codes. In this case, the customer simply dials the long-distance company's 10XXX access code followed by a "1", plus the area code and telephone number. This type of dialing pattern permits the long-

distance company to complete an intraLATA toll call by routing the call to the long-distance company's switch instead of the local exchange company's switch.

This type of dialing arrangement is applicable not only to residential customers, but business customers as well. Long-distance companies frequently reprogram the business customer's private branch exchange (PBX) with their 10XXX access code. In this situation, the caller does not need to dial the access code. They only need to dial 1 plus the number they are calling.

SWBT and other local telephone companies have encountered the growing numbers of long-distance companies that are providing alternatives to intraLATA long distance using 10XXX. In 1994 many of these alternative providers began advertising a 10XXX dialing pattern as an alternative to SWBT's 1+ intraLATA toll service. Exhibit 41 below shows the result of this advertising campaign. Minutes of use shown in the chart refers to a measurement of time used for billing long-distance calls. SWBT believes the 10XXX alternative dialing pattern accounted for a 32 percent increase in intraLATA minutes of use for Texas long-distance companies. This is in contrast to SWBT's 1+ intraLATA 5.5 percent decrease in minutes of use over the same period of time. During this interval, interstate long-distance minutes of use increased 8 percent nationally.



Prepaid calling cards

Prepaid calling cards are being introduced by long-distance companies. These cards are marketing concepts used to increase long-distance use and obtain new customers. A card purchaser dials a special access number, then follows the instruction of the card issuer to complete the call. This new marketing ploy is becoming a competitive fight for basic long-distance service and is one of the latest marketing methods used to obtain both intraLATA

and interLATA long-distance customers. The cards are being sold over the phone, over the Internet, in vending machines and over the counter. Several large corporations are selling these cards: 7-Eleven, AT&T, MCI, Sprint and LDDS/WorldCom.

AT&T Corp., MCI Communications Corp., Sprint and LDDS/WorldCom are promoting them as a convenient alternative to coins or credit cards for long-distance calls. For example, in a \$30 million deal with General Mills, Sprint launched a prepaid calling card that would be included in a variety of cereals.

Flat rate or discount calling plans

Long-distance companies continue to find ways to increase their long-distance usage. Two examples are flat-rated plans and discount plans. Flat rated calling is a constant rate per minute for long-distance calls. Discount plans usually apply if a customer spends more than \$10 per month on long-distance service. The discounts range from 10 to 40 percent off the published long-distance rate. Several companies are currently offering these plans: LCI International, AT&T and MCI. AT&T True Savings and MCI's Friends and Family are examples of such discount calling plans.

Packaging of services: "one-stop shopping"

A strategy that is being adopted by many companies is combining long distance with other services and marketing a "package" of telecommunications services. MCI has rolled out a product they call "MCI One" that combines long distance, paging, and Internet access. The service is tied to an 800 number that can "find" the customer at home, at the office, etc. The customer receives one bill for the package of services, and MCI includes free voice mail, call waiting, and five hours of Internet access per month. GTE, which was freed to offer long distance by passage of the federal Telecommunications Act of 1996, has partnered with WorldCom to offer a package called "Easy Savings." It includes local, long distance, and wireless services with one bill to the customer for all three. GTE offers the arrangement in all 28 states in which it offers local service. American Telco, which is a certified local service provider in Texas and is also a long-distance provider, has developed plans for local and long-distance packages to be offered to its long-distance customers in Texas.

Potential competition

Marketing alliances: sharing customers

Marketing alliances promise to play a large role in future long-distance competition. In particular, alliances between two dissimilar telecommunications providers will afford long-distance companies the opportunity to reach a larger number of potential customers. Bell Atlantic is the first regional Bell operating company to register with the Texas PUC as a long-distance company. With Bell Atlantic aligned with NYNEX and AirTouch Communications, a huge network is created for carrying telecommunications services. Also, Sprint's alliance with TCI, Comcast, and Cox cable television companies, known as

Sprint Spectrum, will pass 40 percent of the nation's cable TV subscribers. They plan to serve 10 million homes by 1997. This arrangement will give Sprint access to these cable TV customers, and enable the alliance to offer packages of services including long distance.

Marketing meets technology: the wireless substitute

Wireless service providers, such as cellular companies, have the potential to impact the long-distance market with their marketing strategies. Cellular carriers who offer their customers large geographical areas of toll-free calling will change the concept of long-distance calling. These plans will encourage customers to use cellular providers rather than using their traditional home or business telephone. One provider, MCI Communications Corp., will offer cellular phone service to nearly half of the nation by the end of the year 1996, and will charge cellular customers the same rate for long-distance calls as for local calls.

Emerging technology: Internet long-distance calling

The Internet can be used today to transmit and receive voice messages. Although the quality of transmission suffers with average computers, in time the speed of data transmission will erase this concern. There are approximately 30 million Internet users today, with the count increasing daily. During the first quarter of 1996, on-line service companies signed up 1.7 million new subscribers. Since February 1996, AT&T WorldNet enlisted 280,000 of AT&T's long-distance customers, offering five free hours of Internet use per month. Considering the rapid growth of Internet users, and the world-wide reach of the Internet, the potential demand is enormous. All long-distance markets may soon be impacted by the competition from Internet-based providers.

Barriers to entry

There are no barriers for intraLATA or interLATA long-distance services.

Network Access Services

INTRODUCTION

Traditionally, access services have been provided by local exchange telephone companies in two forms. These include switched access and special access. An alternative service is available through competitive access providers (CAPs).

The main type of access service is switched access. Local exchange telephone companies have provided switched access service primarily to long-distance companies. This service is purchased from local exchange companies at a cost.

Long-distance companies do not typically have their own local network to complete long-distance calls. The "access" part of switched access refers to the need of a long-distance company to access the local network of a local exchange telephone company to complete long-distance calls. The "switched" part of switched access refers to the local exchange company's ability to switch long-distance calls to any of its local customer's residential or business locations through its central office switches.

A second type of access service is special access. Special access does not require the use of switches because it was established to connect two specific points without the use of switch. Since the mid-1980s, competitive access providers (CAPs) have been alternative suppliers of special access. CAPs are facility based telecommunications companies created to connect large businesses directly to their long-distance company of choice and to connect separate business locations together. As an alternative provider of special access, CAPs provide private, dedicated telephone lines that go from one point to another, often times from a business customer location to a long-distance company switch location for the purpose of originating and terminating long-distance calls. These direct connections bypass the local exchange company's switch, allowing the business and the long-distance provider to avoid the local exchange company charges related to switching long-distance calls.

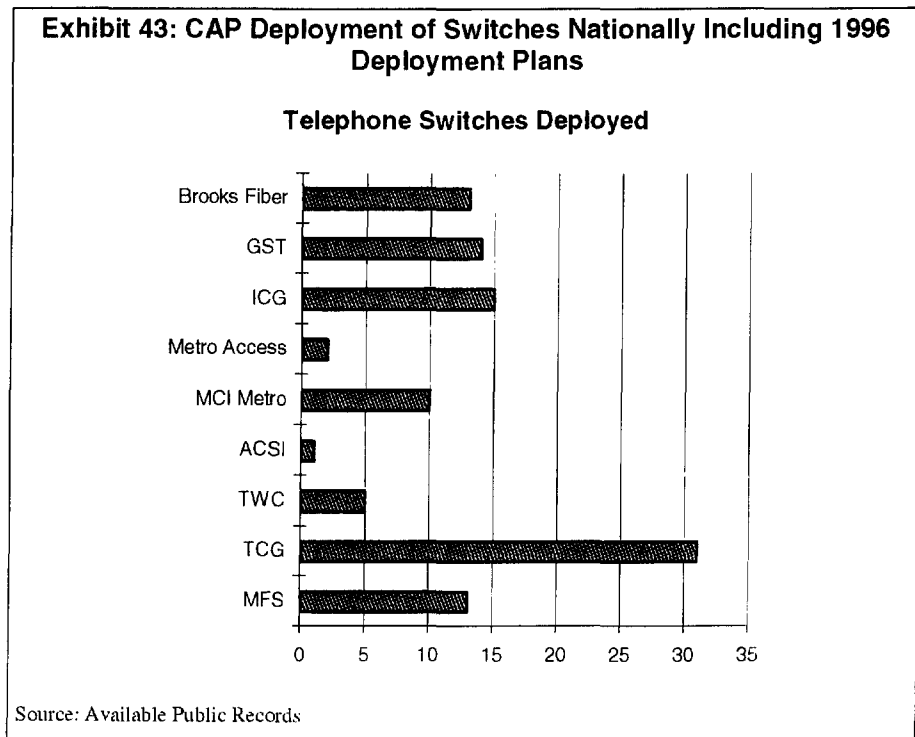
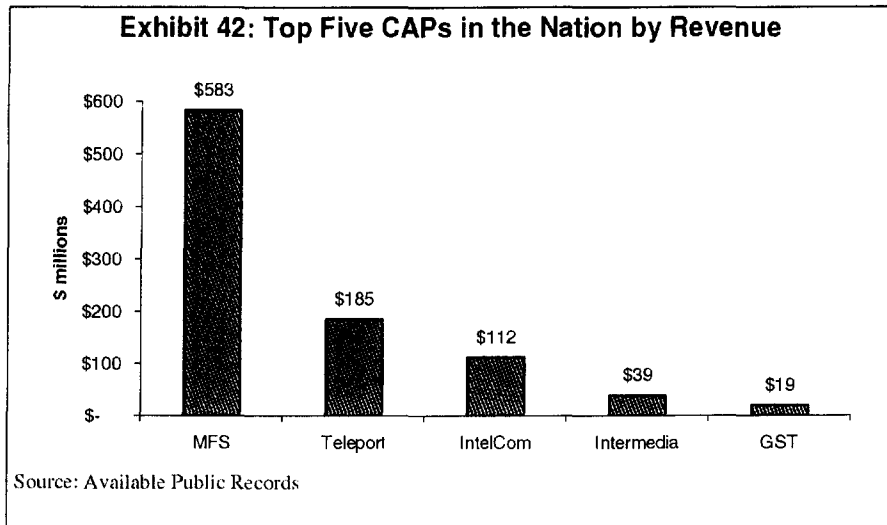
When CAPs first installed their high-volume, geographically limited networks, business customers found a means to diversify their networks. From then on, users, including long-distance companies, considered alternative routing and even alternative suppliers as mandatory for their networks. CAPs positioned themselves to become the alternative carriers of choice and the source of diversity. This positioning has come at the expense of local exchange telephone companies such as SWBT.

CAPs have greatly contributed to the growth of telecommunications. Nationally, more than 50 CAPs provide special access. These CAPs also provide a number of other services including switched local access services. The top five CAPs by revenue include

Metropolitan Fiber Systems (MFS), Teleport Communications Group (TCG), IntelCom Group (ICG), Intermedia Communications and GST Telecommunications (GST). Exhibit 42 shows the top five CAPs by revenue. Nationally, total revenues of all CAPs are estimated to be in the range of \$1.7 billion.

Many CAPs intend to upgrade their networks in 1996 by increasing route miles, deploying telephone switches and seeking certification from state regulators to provide local telephone service. In fact, CAP expansion into new markets and their increasing deployment of switches have

spawned a new name for these companies—competitive local exchange carriers. Deployment of telephone switches allows CAPs to offer local telephone services and offer switched access services to long-distance companies and business customers in competition with local telephone companies such as SWBT. Exhibit 43 shows deployment of switches nationally by CAPs that have a presence in Texas. Switch deployment information was not available for Fibrcom, Phonoscope and CSW which also have a



appear in Exhibit 43. Together, CAPs have laid over 365,000 miles of fiber optic cable as of the end of 1995.

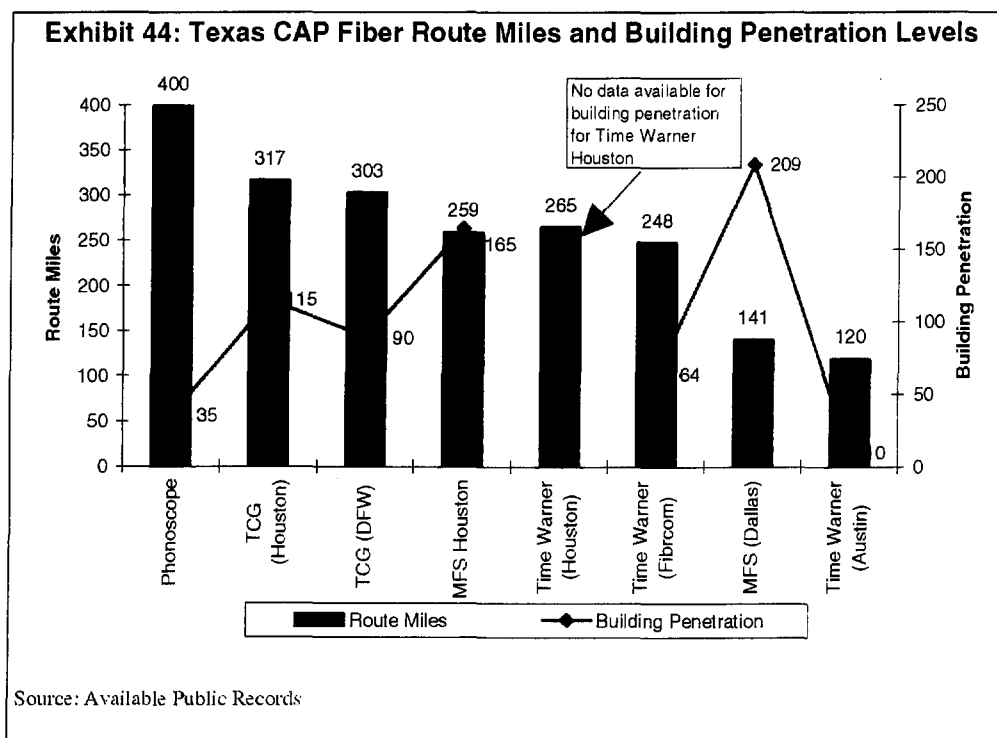
Known competition

Of the top five CAPs shown above, MFS and TCG are currently operating in Texas and are certified as SPCOAs to provide local exchange services, including access services. ICG and GST have plans to construct fiber optic networks in Texas. All of the top five CAPs featured here are certified in other states to provide local telephone service.

CAPs currently operating in Texas are significant competitors to local exchange companies, such as SWBT, in the provision of access services. With PURA 95 and changes to federal law, competition from CAPs has increased. Long-distance companies, through arrangements with CAPs, also provide a high level of competition for SWBT for the provision of access services in Texas.

In Texas, nine different CAPs have entered SWBT's service area with 18 separate networks to offer access services. These CAPs include MFS, TCG, Time Warner Communications (TWC) and its subsidiary Fibrcom, Phonoscope, American Communications Services, Inc. (ACSI), MCI Metro, CSW Communications and Metro Access. Competition for the provision of access services clearly exists in Texas.

Exhibit 44 shows the known fiber route miles and levels of building penetrations for six of the nine CAPs in Texas. Complete information was not available for all nine CAPs operating in Texas.



CAPs in Texas provide services via fiber networks in the nine metropolitan areas. These include Austin, Dallas, Fort Worth, San Antonio, Corpus Christi, Houston, Harlingen,

McAllen and El Paso. Of the nine CAPs active in Texas, MFS, TCG and Time Warner, are approved to provide local exchange telephone service in Texas. ACSI has an application pending before the PUC to provide local service as an SPCOA.

The four CAPs featured below illustrate the growing trend among CAPs to provide switched access services. In addition, AT&T's agreement with several CAPs to provide access services is highlighted.

- **Teleport (TCG)**

TCG currently operates as a CAP in Dallas, Houston and Fort Worth. It has plans to operate in Lubbock. TCG operates in 48 markets, has 5,428 route miles and connects to 4,660 buildings nationwide. Its 1995 revenues were \$185 million, of which \$63.9 million was derived from switched services.

TCG recently filed a registration statement with the Securities and Exchange Commission to become a publicly held company with an estimated value of about \$2.5 billion. Analysts had predicted that privately held CAPs such as TCG would have to appeal to the public markets to fund expansion and development.

According to the prospectus, TCG hopes to provide a wide range of local telecommunications services, expand into additional geographic market areas, increase network facilities, offer switching services, call processing and other services to cable companies.

TCG has received approval from the PUC to operate as an SPCOA in Texas. According to records filed with the PUC by TCG, the company will provide an entire range of local exchange services and exchange access services as well as enhanced ISDN services in Houston and Dallas.

In addition to Texas, TCG is certified to provide a broad range of local services in 12 other states. These states include Arizona, Connecticut, Florida, Illinois, Maryland, Massachusetts, Michigan, New York, Rhode Island, Washington and Wisconsin. TCG also has applied for local telephone service certification in three states. These states include New Jersey, Ohio and Oregon.

Teleport's potential as a competitor in access services as well as other telecommunications areas goes well beyond what was documented in its application to become an SPCOA. Its potential arises from its history as a competitive access provider and its association with other service providers.

Teleport began operating as a competitive access provider (CAP) in 1989 in Dallas and Houston. It was purchased by four large cable TV companies in 1992. The purchasers, and their respective shares of ownership, are TCI (30 percent), Cox (30 percent), Comcast (20 percent), and Continental (20 percent). These companies are changing the landscape of telecommunications through mergers and joint ventures.

Together, the cable TV company ownership of Teleport pass 2.3 million, or 34 percent of the homes in Texas. They are rapidly deploying fiber optic cable in preparation of providing local telephone service as well as traditional video entertainment.

- **Metropolitan Fiber Systems (MFS)**

MFS currently operates as a CAP in Dallas and Houston. It has made plans to provide CAP service in Austin. In Dallas, MFS has 141 miles of fiber serving approximately 209 customer locations. In Houston, MFS has 259 miles of fiber serving approximately 165 customer locations. Reports reveal that MFS is planning networks in Austin and San Antonio. MFS operates in 50 major cities nationwide. Its 1995 revenues were \$583 million, which represents about half of all CAP company revenues nationally.

MFS has received approval from the PUC to operate as an SPCOA in Texas. According to records filed with the PUC by MFS, the company will provide an entire range of local exchange services and switched access services in Houston and Dallas. MFS's strategy is to combine its own network with resale of SWBT facilities. The company has already installed a switch in Dallas to handle local and long-distance calls. In fact between May 1994 and April 1995 MFS reports a total of 2.5 million intrastate switched minutes of use.

In addition to Texas, MFS is certified to provide a broad range of local services in 13 other states. These states include California, Connecticut, Florida, Illinois, Maryland, Massachusetts, Michigan, New York, Ohio, Oregon Pennsylvania, Washington and Wisconsin. MFS has also applied for local telephone service certification in four states. These states include Delaware, Georgia, New Jersey and Virginia.

- **American Communications Services, Inc. (ACSI)**

ACSI is a CAP that currently operates in El Paso and Fort Worth. It has announced plans to operate in Austin. ACSI has filed five SPCOA applications to provide services in Amarillo, El Paso, Fort Worth, Irving and certain metropolitan LATAs. Both ACSI—Amarillo and ACSI—Irving have been approved as SPCOAs in Texas. According to documents filed with the PUC by ACSI, it plans to offer local telephone service, switched access service and PBX local trunking. ACSI will operate as both a facilities based carriers and areseller of private line and local exchange services.

ACSI currently has networks in operation in Columbia, South Carolina; Greenville, South Carolina; Little Rock; Louisville; Albuquerque; and Mobile and Montgomery, Alabama. It is currently building eight new networks that will be in operation by the end of 1996. ACSI—Amarillo is one of the approved SPCOAs that has built a new fiber network.

- **Time Warner Communications (TWC)**

TWC currently operates as a CAP in Austin, and San Antonio. It has announced plans to have operations in Dallas and El Paso. TWC is operating in 14 major metropolitan areas nationwide.

Time Warner has received authority from the PUC to operate with a COA in the Austin-Round Rock area. Time Warner's COA application indicates that it will provide local telephone service over cable lines of affiliate Time Warner Cable. The

company has already installed a telephone switch and has upgraded its network to fiber optic cable.

In addition to Texas, TWC is certified to provide a broad range of local services in 4 other states. These states include Florida, New York, Ohio and Tennessee. TWC also applied for local service certification in four states. These states include Hawaii, North Carolina and Wisconsin.

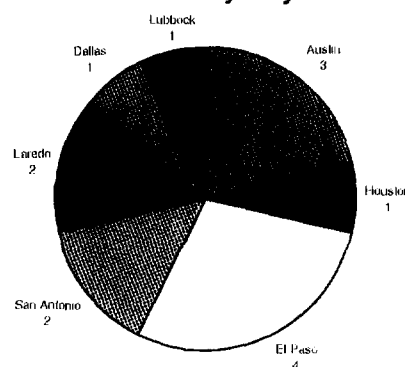
- **AT&T**

AT&T has signed agreements with five CAPs which will allow it to reach its business customers in 70 cities using facilities other than those provided by local exchange companies. Four of the CAPs, Brooks Fiber, Hyperion Telecommunications, ACSI and ICG have agreed to provide dedicated connections to businesses. ACSI is currently operating in Texas. Brooks Fiber and ICG have announced plans to provide service in Texas. Time Warner Communications, a fifth provider and holder of a COA in Texas, has agreed to provide switched local phone service and switched access for business customers, in addition to dedicated special access. AT&T is negotiating with the first four CAPs for additional switched services.

Potential competition

SWBT anticipates that CAPs will continue expanding in Texas, pressing further into switched services. A total of 14 new CAP networks are being planned or are already under construction across Texas. Exhibit 45 shows the location and number of CAP networks under

Exhibit 45: CAP Networks under Development or Planned in Texas by City



Source: Available Public Records

development or planned by city location. Records indicate that of the nine CAPs currently active in the state, all but Phonoscope have planned new networks. Metro Access and ACSI are actively building additional fiber networks. Metro Access has begun an expansion of its Austin network and has begun work on a planned network in San Antonio. ACSI has recently completed an 80-mile network expansion in Fort Worth.

Public records indicate that at least three new CAPs have planned to deploy networks in Texas. These include Brooks Fiber, GST and ICG. Brooks Fiber, a Missouri based company, plans a network in El Paso. Washington state based GST also plans a network for El Paso. ICG, a Denver-based CAP is planning to use excess fiber from the city of San Antonio electric utility to build a network.

In addition to new CAP networks contributing to competition for the provision of access services, additional competition is expected to come from companies that have not yet been approved to provide local services under provisions of PURA 95. MCI is potentially an example of such a company. MCI has had one SPCOA filing denied, and currently has one SPCOA filing pending and one COA pending.

- **MCI**

MCI is in an excellent position to compete with many telecommunications providers for the provision of services, including access. MCI is currently operating as a long-distance company, competitive access provider and local service provider. This long-distance company could enter the market as a COA by complying with requirements under PURA '95. MCI has also applied to provide local service in 19 states and has been approved in 14. MCImetro, a subsidiary, currently operates as a CAP in Dallas. It has plans to move into Austin and Houston. MCImetro was formed in 1993 to enter the local service market, competing with local exchange companies and other CAPs. MCImetro is currently providing local telephone services in Baltimore, Boston, Chicago, Detroit, Hartford, Milwaukee, New York City, Pittsburgh, Philadelphia and Seattle. Through its subsidiaries, joint ventures and alliances, MCI has full or part ownership of 40 local networks in 25 major cities.

Barriers to entry

SWBT sees no barriers to entry into network access services.